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EXAMINER

STORM, DONALD L

ART UNIT

PAPER NUMBER

2626

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/693,620

Applicant(s)

JABRI ET AL.

Examiner

Donald L. Storm

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on October 23, 2003 through March 10, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 and 14-23 is/are allowed.
- 6) ☒ Claim(s) 12, 13 and 26-38 is/are rejected.
- 7) ☒ Claim(s) 24, 25 and 33-35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-11 and 14-23 are allowed. Claims 12, 13, 24, and 25 would be allowable over the prior art of record if any objections or rejections under 35 U.S.C. 112 are overcome, especially as appearing in this Office action. Certain assumptions that make the limitations clear have been considered for the claims, as described next or elsewhere in this Office action.
2. The following are statements of reasons for the indication of allowable subject matter:
3. Claim 1, and by dependency claims 2-21, require interpolated LSP parameters and an overflow signal in association with them, and the allowable subject matter of the claims resides in the whole structure and interaction expressed by the combination of all limitations compared to the prior art of record. The closest prior art that was found (Mermelstein, Zinser, Tsuchinaga) describes converting parameters of speech analysis and synthesis from an encoding/compression scheme to another scheme. No particular reference provides relevant, objective evidence to make the claimed medium and method obvious by changing the closest prior art to include the LSP modification, the first and second pulse positions and signs for fixed codebook mapping, particularly with the overflow signal.
4. Claim 22 requires interpolated LSP parameters and an overflow signal in association with them, and the allowable subject matter of the claims resides in the whole structure and interaction expressed by the combination of all limitations compared to the prior art of record. The closest prior art that was found (Mermelstein, Zinser, Tsuchinaga) describes converting parameters of speech analysis and synthesis from an encoding/compression scheme to another scheme. No particular reference provides relevant, objective evidence to make the claimed

medium and method obvious by changing the closest prior art to include the LSP modification and quantization related to a destination codec, particularly with the overflow signal.

5. Claim 23 requires a pitch gain codebook including sums associated with terms included in the codebook, and the allowable subject matter of the claims resides in the whole structure and interaction expressed by the combination of all limitations compared to the prior art of record. The closest prior art that was found (Champion) describes pitch and gain conversion for changing the bit rate at which speech is encoded. Other relevant prior art (Mermelstein, Zinser, Tsuchinaga) describes converting parameters of speech analysis and synthesis from an encoding/compression scheme to another scheme. No particular reference provides relevant, objective evidence to make the claimed medium and method obvious by changing the closest prior art to include dot products of (delayed) signals, and a dot product associated with the pitch gain codebook, particularly with an index of a codevector and its associated adaptive codebook pitch lag.

6. Claim 24 requires a target signal, its modification, and first and second pulse positions and signs for fixed codebook mapping, and the allowable subject matter of the claims resides in the whole structure and interaction expressed by the combination of all limitations compared to the prior art of record. The closest prior art that was found (Mermelstein, Zinser, Tsuchinaga) describes converting parameters of speech analysis and synthesis from an encoding/compression scheme to another scheme. No particular reference provides relevant, objective evidence to make the claimed medium and method obvious by changing the closest prior art to include the first and second pulse positions and signs for fixed codebook mapping, particularly with the target signal and modified target signal.

7. Claim 25 would be allowable because it inherits the allowable subject matter of claim 24 by dependency, if the Examiner's assumption about dependency for claim 25 is correct.

8. The method claim elements of claim 26, and by dependency claims 27-38, distinguish from prior art due to the whole structure and interaction expressed by the combination of all limitations compared to the prior art of record by requiring interpolated LSP parameters and an overflow signal in association with them. No particular reference provides relevant, objective evidence to make the whole structure and interaction of the method claim element obvious by changing the closest prior art of record (Mermelstein, Zinser, Tsuchinaga) to include a dot product associated with the pitch gain codebook, particularly with first and second pulse positions and signs for fixed codebook parameter generation associated with a target signal and modified target signal.

***Information Disclosure Statement***

9. A copy of the International Search Report (Form PCT/ISA/210) (received March 10, 2005) is present. The search report and its cited documents have been considered by the Examiner.

***Oath/Declaration***

10. The declarations submitted by the Applicant were received on May 19, 2004 and June 29, 2004.

***Drawings***

11. The proposed substitute drawings (16 sheet(s), received May 19, 2004) are present and are now the Figs. 1-10, 10A, and 11-16 of record. These drawing sheets are substantively acceptable to the Examiner. See 37 C.F.R. § 1.81 and 1.83.

12. The Examiner notes, without objection, the possibility of informalities in the drawings. It is in the best interests of the patent community that the Applicant be aware of these editorial situations and consider correcting minor errors during normal review and revision of the drawings.

In Figs. 5 and 6, the title of the vertical axis and the legends of both axes cannot be read due to the heavy shading of the background.

### ***Claim Informalities***

13. Claim 24 is objected to under 37 CFR 1.75(a) because the meaning of the phrase “the fixed codebook indices for the subframe” (final two lines) needs clarification. Because it was not previously recited that either the codebook or the subframe have indices, it may be unclear as to what element this phrase refers. One of ordinary skill in the art may be unsure of whether the recitation of “the fixed codebook indices for the subframe” further limits the previously recited codebook and/or subframe to either a codebook that already stores indices or to subframes that already correspond to some unspecified indices, and more indices are determined. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase as --fixed codebook indices for the subframe--.

14. Claim 25 is objected to under 37 CFR 1.75(a) because the meaning of the phrases “the first target signal”, “the second plurality of pulse positions and signs”, and “the plurality of pulses” need clarification. Because no first target signal, no second plurality of pulse positions and signs, and no plurality of pulses were previously recited, it may be unclear as to what element this phrase refers. Pulses, pulse positions, signs, are recited in claim 24. To further timely prosecution and evaluate prior art, the Examiner has assumed dependency from claim 24.

Further, the Examiner has interpreted the phrase “the first target signal” as --the target signal-- for appropriate antecedent basis.

15. Claim 25 is objected to because it inherits the problems of claim 24 by dependency, if the Examiner’s assumption about dependency for claim 25 is correct.

16. Claim 33, and by dependency claims 34-35, are objected to under 37 CFR 1.75(a) because the meaning of the phrase “the adaptive codebook” (line 6) needs clarification. Because no adaptive codebook was previously recited, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase as --an adaptive codebook--.

17. Claim 33, and by dependency claims 34-35, are objected to under 37 CFR 1.75(a) because the meaning of the phrase “the first pitch gain” (line 11) needs clarification. Because no first pitch gain was previously recited, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase as --the pitch gain--.

18. Claim 33, and by dependency claims 34-35, are objected to under 37 CFR 1.75(a) because the meaning of the phrase “the received vector signal” (line 12) needs clarification. Because no received vector signal was previously recited, it may be unclear as to what element this phrase refers. To further timely prosecution and evaluate prior art, the Examiner has interpreted this phrase as --the generated vector signal--.

***Claim Rejections - 35 USC § 112***

19. The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

20. Claims 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, because the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The claims are not adequately enabled by the disclosure because of the breadth of scope of the G.723.1 and GSM-AMR claim elements.

While being reasonably enabling for any G.723.1 and GSM-AMR standards that an artisan may be able to find today, the disclosure does not reasonably provide enablement for all other versions of all G.723.1 and GSM-AMR standards. The disclosure does not provide an artisan with a way to identify the version of the G.723.1 and GSM-AMR with which the Applicant has defined the claimed invention.

All versions of all G.723.1 and GSM-AMR standards are not disclosed. The disclosure does not provide a starting point for one of ordinary skill in the art to make and use the invention commensurate with future versions of G.723.1 and GSM-AMR standards. Future versions of G.723.1 and GSM-AMR standards are not within the ordinary skill of an artisan. An amendment to the specification that specifically identifies the version and date of the G.723.1 and GSM-AMR standards on which the Applicant is relying should be sufficient to provide enablement. With such a starting point, it should be within the skill of an artisan to make and use the invention for any version of G.723.1 and GSM-AMR.



In summary, designation in the specification of dated standards for G.723.1 and GSM-AMR is essential matter; incorporation of an entire standard into the disclosure is not necessary for enablement.

If the Applicant amends the specification to identify G.723.1 and GSM-AMR standards with dates before the filing of this application, the Examiner will not regard such an amendment as new matter. In order to be afforded priority under 35 USC § 119, the Applicant should designate the same version of the standard as set forth in the priority documents and identify where in the priority documents the particular, dated standard is set forth.

It would be in the best interests of the patent community for the Applicant to provide copies of the G.723.1 and GSM-AMR standards that define the claimed subject matter.

21. Claims 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

22. Regarding claim 12, the claim scope is uncertain since the generic standard does not have a stable, constant, and clear definition. The disclosure does not provide a way to determine the definition of all variations of G.723.1. The version of the G.723.1 with which the Applicant has defined the claimed invention should be described in the specification by date and other identifying features.

Regarding claim 13, the claim scope is uncertain since the generic standard does not have a stable, constant, and definition. The disclosure does not provide a way to determine the definition of all variations of GSM-AMR. The version of the GSM-AMR with which the Applicant has defined the claimed invention should be described in the specification by date and other identifying features.

***Claim Rejections - 35 USC § 101***

23. The following is a quotation of 35 U.S.C. 101:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

24. Claims 26-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. See MPEP § 2106, "Patent Subject Matter Eligibility."

25. Claim 26 recites steps that consist solely of manipulation of symbols or data. Taken as a whole, the claim is drawn to a mathematical method that manipulates parameters. Without setting a practical application for the determined values, the claimed invention as a whole does not produce a useful, concrete, and tangible result. A method that simply manipulates data is nonstatutory as a judicial exception under 35 U.S.C. 101 despite the fact that the data might inherently have some usefulness and despite its implementation by computer. The focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but on the practical application of the judicial exception by producing a physical transformation or a result tied to the material world that does not preempt the judicial exception. If the disclosure as filed supports it, for example, the resulting pulse positions and signs might produce a practical application if they transformed a material storage medium or material display device. For such subject matter to be statutory, the claimed process must actively and positively recite a non-abstract application of the algorithm.

The specification discloses that the method may be implemented by values that exist and remain within an apparatus. Without the implementation of values, the algorithm manipulates symbols. A mathematical algorithm that solely manipulates data or symbols is nonstatutory; however, realizing a recited significant application of the computed results is statutory. A claim

does not preempt a judicial exception to 35 USC 101 when the method, as claimed, produces a concrete, tangible, and useful result; that is, the method recites a step or act of producing something that is concrete, tangible, and useful.

The further limitations of the dependent claims 27-38 continue to describe the manipulation of symbols or data, and do not provide the necessary tangible result to satisfy the requirements of 35 U.S.C. 101.

### ***Conclusion***

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27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Storm, of Division 2626, whose telephone number is (571) 272-7614. The examiner can normally be reached on weekdays between 7:00 AM and 3:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). For general information about the PAIR system, see <http://pair-direct.uspto.gov>. If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 21, 2007

/Donald L. Storm/

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Primary Patent Examiner  
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